

DP300793

## PIEZORESISTIVE TORQUE SENSOR

## ABSTRACT

An automotive steering system with a torque sensor is disclosed.

The steering system comprises a shaft linked to a set of road wheels; a sensor connected to the shaft for sensing torque applied to the shaft and operative to provide as output a signal indicative of said torque; a controller in signal

- 5 communication with the sensor and operative thereby to accept as input from the sensor the signal indicative of the torque applied to the shaft; and a motor coupled to the shaft and in signal communication with the controller and operative thereby to accept as input from the controller a command to apply torque to the shaft.

$\frac{d}{dt} \left( \frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$